1998 LONG-RANGE CHAPTER FIVE

TABLE OF CONTENTS

V. THE PLAN	V-1
A. OVERVIEW OF CONNDOT'S FINANCIAL INVESTMENT GOALS	V-1
B. MAJOR PLAN ELEMENTS	V-2
1. AIRPORTS	
2. HIGHWAYS	
3. TRANSIT	
4. BIKEWAYS, WALKWAYS AND TRAILS	
5. WATERWAYS	
6. OTHER PLAN ELEMENTS.	
a) Air Quality	
b) Energy Conservation.	
c) Land Use/Transportation Planning	
d) Financial	
e) Access Management	V-5
f) Intelligent Transportation Systems (ITS)	V-5
C. STATE-OWNED AIRPORTS: STUDIES & MAJOR PROJECTS	
1. BRADLEY INTERNATIONAL AIRPORT	
a) Terminal at Bradley International Airport	
b) Construction of an Airport Rescue and Fire Fighting Building	
c) Glycol Recovery System	
d) New Maintenance Facility Project 165-328	
2. HARTFORD-BRAINARD AIRPORT	
3. DANIELSON AIRPORT	
4. WATERBURY-OXFORD AIRPORT	
a) Sanitary Sewers Project 107-138	
b) Safety Improvements Project 107-144	
5. WINDHAM AIRPORT	
a) Taxiway "A" Extension Project 163-176	
6. GROTON-NEW LONDON AIRPORT	
a) Kunway 13-33 Reconstruction Floject 36-203	V-12
D. BRIDGE PROGRAM	V-12
1. BRIDGE MANAGEMENT SYSTEM (BMS)	V-12
E. HIGHWAYS: THE COMPONENTS AND THE SYSTEM	V-13
1. HIGHWAY COMPONENTS	
a) Pavement	
b) Traffic Signals	
c) Pavement Markings	V-14
d) Traffic Signs	
e) Highway Lighting	
f) Connecticut Guide Rail Program	
g) Highway Rest Areas (Income Producing Service Areas)	
h) Commuter Parking Program.	
i) Congestion Management System (CMS)	V-16

J) Traffic Monitoring System (TMS)	
k) Safety Management System	
l) ConnDOT's Plan to Facilitate Road Use by Elderly Drivers	
2. STRATEGIC CORRIDOR PLANNING STUDIES	
a) Hartford West Corridor - Hartford to Plainville	
b) I-84 - Waterbury to Southington	
c) Route 82/85/11 Corridor: Salem to Waterford	
d) Southwest Corridor Study	
e) Southeastern Connecticut Corridor Study	
f) Regional Planning Agencies' Corridor Studies	
3. SOUTHWEST CORRIDOR COMMODITY FLOW STUDY	
4. MAJOR CAPITAL PROJECTS: HIGHWAY SYSTEM	
a) Interstate 95 (I-95) Bridgeport Corridor Improvement Program	
b) I-95 "Q" Bridge New Haven	
c) Route 2/2A/32 Corridor	
d) High Occupancy Vehicle (HOV) - I-84 Connection to Hartford	
f) Route 6 - Brooklyn	
g) Route 6 Bolton to Windham.	
h) Route 7 Norwalk to Danbury	
i) Route 7 - Brookfield to New Milford.	
j) Milford - Route 15 - Sikorsky Bridge	
k) Monroe - Route 34 - Stevenson Dam Bridge	
l) Route 72 - Bristol.	
m) Route 34 - New Haven	
F. PUBLIC TRANSPORTATION	V-28
1. TRANSIT	
a) Statewide Effort to Market Transit	
b) Bus Transit Studies	
c) Capitol Region Council of Governments' Regional Transit Strategy	
2. RIDESHARE PROGRAMS	
3. RAIL PROGRAMS	
a) Rail Parking	
b) At-Grade Crossings	
c) Commuter Rail System Safety Program Plan	
4. MAJOR CAPITAL PROJECTS: TRANSIT (BUS AND RIDESHARING)	
a) CT TRANSIT - Bus Replacement	
b) Waterbury Bus Facility: ROW, Preliminary Engineering, and Construction	
c) CT TRANSIT - New Haven Bus Facility: ROW, Preliminary Engineering and Construction	
5. MAJOR CAPITAL PROJECTS: RAIL	V-33
a) Replace BR#03673 over Arch Street (MP 28.06)-Greenwich	
b) Construction of ADA Improvements - Darien Railroad Station	
c) Construction of ADA Improvements - Westport Railroad Station	V-34
d) Construction of ADA Improvements - Fairfield Railroad Station	V-34
e) C - 23 Track Program FY 1998	
f) Construct Stamford Center Island Platforms	
g) New Haven Shops & Yard - New Haven Line Car Storage Yard	
h) Main Line Catenary Replacement - State line to Stamford	
i) New Haven Parking Garage Expansion	
j) Electrical Substation Upgrade and New Substation Construction - New Haven	
k) PE, ROW and Utility - Construct New WALK and SAGA Bridges	
l) Main Line Catenary Replacement - Stamford to Norwalk	
m) Replace Multiple Unit Fleet	
n) C-24 Track Program FY 2000.	
o) Stamford Station Parking Garage Expansion	
DE INTERMODE & LIGHT OURTHICK INCW. LTANSPOTTATION BIHIGHT	V - 16

G. BIKEWAYS, WALKWAYS AND TRAILS	V-30
1. VISION	V-3
2. GOALS	V-3
H. WATERWAYS	V-4
1. CONNECTICUT STATE FERRY SERVICE	V-4
2 STATE DIED	V A

V. THE PLAN

In this chapter ConnDOT's plans for State transportation services and facilities are presented. An overview of the goals of ConnDOT's strategic financial investment plan and lists of major plan elements are followed by discussions, by mode, of the Department's programs, initiatives, major studies, and major projects in progress or to be undertaken in future years.

A. OVERVIEW OF CONNDOT'S FINANCIAL INVESTMENT GOALS

The passage of the Clean Air Act Amendments of 1990, the publication of the ISTEA regulations in 1991, and the concern that federal transportation funds would be reduced prompted the Department to review the total transportation situation in Connecticut in 1992, including state and regional transportation plans. A strategic financial investment plan evolved from this review that established the following six broad transportation investment goals:

- 1) Ensure Safety
 - Eliminate Hazards
 - Upgrade Signing
 - Maintain Lane Delineation
 - Maintain Equipment
- 2) Maintain the Existing System
 - Resurface 438 2-Lane Miles Each Year
 - Rehabilitate Poor and Fair State Bridges (approx. 45/year)
 - Replace All Buses Over 12 Years Old
 - Maintain all Rail Cars, Track, Bridges, Power Supply Systems and Stations
 - Rehabilitate Runways and Terminals
 - Maintain Ferries and the State Pier
- 3) Increase System Productivity
 - Incident Management
 - Interconnected/Computer Controlled Signal Systems
 - Ridesharing
 - Commuter and Rail Station Parking
 - Transit Service Scheduling
 - Aviation and Port Marketing
- 4) Promote Economic Development
 - Provide Quality Transportation Infrastructure
 - Institute Urban Initiatives
 - Facilitate Economic Investment
- 5) Provide Required Capacity
- 6) Utilize All Available State and Federal Funds Effectively

It was decided that the first three goals should be the focal point for transportation resources as Connecticut transitioned from the ambitious infrastructure renewal "catch up" program of the 1980's to a program targeted more at the maintenance and efficiency of the existing system. Connecticut must not return to a period of increasing deferred maintenance, which is not cost effective, and which decreases the safety and productivity of the transportation system. In addition, resources will be made available to assist with economic development initiatives and to provide limited added capacity where required. The entire transportation system, including highway, bridge, rail, bus, airport and waterways, will be given fair consideration in achieving the goal of utilizing all available funds effectively.

B. MAJOR PLAN ELEMENTS

1. AIRPORTS

Bradley International Airport

- Aggressively market the services provided by BIA to enhance its considerable regional economic impact.
- Expand terminal facilities to accommodate projected passenger volumes and improve the level of passenger service.
- Increase automobile parking convenience.
- Market properties that are available for development.

General Aviation Airports

- Utilize available land at airports to the maximum possible benefit.
- Complete the airport property inventory and computerized mapping program.
- Market properties that are available for development.

2. HIGHWAYS

- Resurface approximately 400 2-lane roadway miles annually.
- Rehabilitate poor and fair state bridges.
- Repave and maintain state-maintained commuter parking facilities as needed.
- Continue inspection of the Department's Highway and Railroad structures.
- Utilize Intelligent Transportation Systems (ITS) strategies to maximize the use of the existing transportation network.
- Continue to implement projects to provide a safe and efficient highway system that maintains the transportation infrastructure and provides necessary capacity improvements that enhance the existing transportation system.

3. TRANSIT

- Maintain the transit system in a good state of repair.
- Increase ridership by improving the quality of service.
- Improve accessibility for the disabled.
- Develop the single concept, i.e., one ticket is good on all state subsidized transit modes.
- Expand the guaranteed ride home program statewide.
- Enhance the intermodality of services, promoting seamless services.

Rail

- Provide oversight of the New Haven Line jointly with New York.
- Expand rail commuter parking lots in non-attainment areas as the first priority, then in other areas of the State, based on demand and usage.
- Systematically replace all wooden crossties with concrete crossties on the New Haven Line to reduce maintenance and effect long term cost savings.
- Replace worn out conventional rail on the New Haven mainline with continuous welded rail
- Maintain all rail cars, track, bridges, power supply systems and stations.

Bus

- Replace buses over 12 years old.
- Establish a minimum level of peak period service for all express bus systems.
- Provide convenient connections on the Shore Line East rail service to the New Haven Central Business District and with New Haven Line trains.
- Provide convenient connections between New Haven Line rail stations and high employment areas.

4. BIKEWAYS, WALKWAYS AND TRAILS

- Ensure the safety of bicyclists, pedestrians and motorists by providing adequate shoulders along highways.
- Bank abandoned rail rights-of-way for future use as multi-use trails.

5. WATERWAYS

- Maintain ferry services.
- Re-construct the State Pier in New London to modern shipping standards.
- Construct the necessary warehousing at the State Pier.
- Market the New London Port to attract significant shipping to the State Pier.

6. OTHER PLAN ELEMENTS

a) Air Quality

- Encourage and support technological advancements related to auto and bus engines and fuels.
- Continue to support rideshare programs and the rideshare organizations.
- Improve and expand commuter parking lots including parking lots at rail stations.
- Continue to explore and encourage alternatives to single occupant vehicles (SOVs).

b) Energy Conservation

- Maintain the existing transportation system in a state of good repair.
- Increase the efficiency of the existing transportation system.
- Support rideshare organizations.
- Support demonstration projects for alternative fuel technologies
- Support demonstration projects for new and innovative transit services.
- Encourage employee participation in rideshare programs.
- Promote and facilitate the increased use of non-motorized transportation modes.

c) Land Use/Transportation Planning

- Achieve better coordination between land use planning and transportation planning.
- Find workable solutions to encourage development that will maximize the longevity of benefits from transportation investment.
- Provide mobility while addressing the environmental issues.
- Deal with land use and development issues regionally.
- Consider land use goals in funding decisions for transportation projects.
- Preserve rights-of-way for construction of future transportation projects.
- Consider impacts on national parks, recreation and scenic areas, monuments and historic sites, etc.
- Consider any State plan developed pursuant to the Federal Water Pollution Control Act.
- Cooperate and coordinate with Indian tribal governments on transportation issues of concern to them.
- Identify and utilize the available land at the State airports to the maximum possible benefit.

d) Financial

- Continue support of the New England Transportation Initiative (NETI) Study to promote innovative and fiscally sound financing policies.
- Consider investment strategies to improve adjoining State and local roads that support rural economic growth and tourism, federal agency renewable resources management and recreation development.

e) Access Management

- Through the RPAs, encourage and work with local communities to prepare access management plans for local roads.
- Continue the Department's encroachment permit process to review applications for driveway access with respect to safety and operational integrity.
- Continue to support the Traffic Commission certificate of operation reviews for major developments which impact state highways.
- Assess the ramifications of implementing a formal access management system through legislative authority or administrative regulations.

f) Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) involve the application of advanced technology to assist in the solution of transportation problems and the management of transportation systems. Of key importance are telecommunications and information technologies that allow information on the transportation systems and current conditions to be collected, processed, and disseminated. The information is valuable to transportation agencies that are responsible for operating and managing the systems. But it is also valuable to the traveling public who must make decisions about what mode to use, which route to take, or what time of day to travel. Collectively these applications of telecommunications and information technologies are known as Intelligent Transportation Systems. These systems can help reduce congestion, improve safety, and improve mobility.

Connecticut continues to move forward in many areas of existing and emerging technologies, and institutional team building to incorporate ITS into the existing transportation network. It is also involved in regional and national plans which will greatly benefit maximum use of existing systems and users of the network. Examples of these initiatives include:

• Model Deployment Initiative (MDI). Connecticut, through its affiliation with the Transportation Operations Coordinating Committee (TRANSCOM), is a partner in a public/private effort that was one of four selected in the country to participate in the USDOT's Metropolitan Model Deployment Initiative. This team will use advanced technologies and existing systems to improve regional transportation management and facilitate public and private sector delivery of enhanced regional traveler information services. One of the components of the regional traveler information services project is TRIPS, the transit itinerary planning system. This program will permit itineraries to be developed for public transportation trips for patrons anywhere in the Tri-State area.

- <u>Commercial Vehicle Information Systems and Networks (CVISN)</u>. Connecticut was selected as one of seven states to demonstrate the feasibility of information technology systems to improve Commercial Vehicle Operations (CVO) administrative efficiency for motor carriers and government. Working with the Department of Motor Vehicles, Department of Revenue Services and the Motor Transport Association of Connecticut, the Department is moving forward in this initiative. A Business Plan has been developed and submitted to FHWA. Efforts are underway to begin development of an interagency electronic credentialing system.
- <u>CVO Mainstreaming</u>. FHWA mainstreaming funds were utilized to build upon the completed institutional issues study to develop a statewide Business Plan to identify the scope of ITS/CVO deployment activities, projected costs and implementation schedule. The final report has been endorsed by the State of Connecticut Motor Vehicle Advisory Council and accepted by FHWA.

The Traffic Management Program continues to develop and improve under the following initiatives:

- Bradley Airport and City of Hartford Video feeds have been added to the Newington Operations Center, greatly enhancing the amount of video coverage. System integration is underway to maximize use of existing systems and to allow for greater flexibility. Future expansion will include fiber optic cable links for distribution of real-time video and incident data between the Newington and Bridgeport Operation Centers, the City of Hartford Operations Center and State Police centers in Hartford and Middletown.
- Future additions to the program, through a number of Department construction projects, include expansion of the traffic management system in the Greater Hartford area. A system comprising fiber optic conduit, cameras and Variable Message Signs (VMS) is in design for the I-84, I-91 and Route 2 corridors. Other traffic management system projects are planned for the Greater New Haven, Waterbury and Danbury metropolitan areas.
- The Management Information System for Transportation (MIST) components at the Bridgeport Operations Center continue to be added and debugged. The institutional partnership with the State Police continues to be fortified and enhanced through the technology and information sharing. Video feed capability to the media and other outside viewers has been added to the system.
- Connecticut Highway Assistance Motorist Patrol (CHAMP) continues to be operated in the I-95 Corridor with additional vehicles planned for the Hartford area. The program is assisting an average of 1200-1400 motorists per month.
- A Highway Advisory Radio (HAR) project will be completed in the fall of 1998 which will result in HAR radio transmitter stations along I-95 in Fairfield, Stratford, Darien and West Haven; the Merritt Parkway in Trumbull, and an upgrade of the existing stations on I-84 in East Hartford and I-91 in Windsor. New HAR sites are also planned for installation in construction projects along I-91 in Rocky Hill and I-84 in Farmington.
- Computerized traffic signals systems remain a vital component of the Department's effort to
 optimize traffic flow along State arterials. Approximately 900 intersections are currently controlled
 by centralized and on-street computerized systems, with new systems added if computerization

- warrants are met. The Department is in the process of upgrading existing systems that utilize older coordination equipment to ensure that operational efficiency is maintained.
- ConnDOT, in cooperation with the Capitol Region Council of Governments, has completed the Strategic Deployment plan for future ITS development in the Hartford area, and has prepared a funding and deployment schedule for elements of the plan. A similar process is underway with the South Central Council of Governments.

ConnDOT, through its affiliation with TRANSCOM and the I-95 Corridor Coalition, is also involved in the following projects:

- Service Area Traveler Information Network (SATIN) is a TRANSCOM project that will establish a system of kiosks in selected rest areas within the Connecticut, New York, New Jersey area to provide transportation information to the system users.
- Interagency Remote Video Network (IRVN) is a TRANSCOM project that will link video feeds among the various operations centers in the region to assist in incident management and traveler information efforts.
- I-95 Corridor Coalition Advance Traveler Information System (ATIS) projects will link traveler information from Maine to Virginia and will provide that information to the public through public/private initiatives.

The Incident Management Program was initiated in 1992 by implementing a policy to enhance existing programs and to formulate a coordinated effort of all public agencies to ensure that the effects of congestion caused by incidents are managed and coordinated effectively. The Incident Management Program continues to develop and improve through the following initiatives:

- ConnDOT in cooperation with the Capitol Region Council of Governments (CRCOG), State and Local Police Departments and town officials has developed traffic diversion plans for major incidents occurring on I-91 from Wallingford to the Mass. State Line and on I-84 from Plainville to the Mass. State Line. These plans provide an effective tool for all responding agencies to coordinate their roles and responsibilities within the incident area.
- Communication among all responding agencies is essential for on scene coordination. A proposed Regional Radio Program for the Capitol Region is presently underway and partnered by CRCOG and ConnDOT. The proposal makes use of some of the existing regional radio systems already in place and will incorporate one NCC/EMS radio frequency, one RAF frequency and the Hartford County Hot Line into a regional radio communication system.
- ConnDOT and the regional planning agencies have developed Incident Management Steering
 Committees. Steering Committees already established include the Southwest Regional
 Incident Management Committee and Capitol Region Incident Management Committee. They
 consist of fire chiefs, police chiefs, State Police, towing and recovery personnel, EMS
 providers, DEP, and ConnDOT personnel. A similar process is soon to begin with the South
 Central Region Council of Governments.

- Four service areas along I-95 are equipped with kiosks that provide travel information directly from the Bridgeport Operations Center. Additional kiosks with the same capability will be provided at the State Welcome Centers through a contract managed by the Office of Tourism.
- ConnDOT notifies C-MED, MetroPool and MetroCommute of any lane or road closures resulting from an accident. Additionally, live video from the I-95 Incident Management camera system is available to the media. Currently, Channels 8 and 12 are receiving their video feeds.

ConnDOT, as the operator and/or funding agency for public transit in the state is investigating opportunities to incorporate ITS technologies into the transit system. A Global Position/Automated Vehicle Location (AVL) System feasibility study is being conducted. AVL is a system that allows dispatchers to determine the exact location of all buses in the operating fleet. The most recent AVL systems use radios, satellite-based global positioning systems (GPS), and geographic information systems (GIS) to track the locations of all vehicles in a fleet. Vehicle location systems can help serve several existing transit functions:

- <u>Schedule adherence</u>: allow dispatchers to monitor how well buses are adhering to schedules.
- <u>Connecting service</u>: allow dispatchers to better coordinate connecting services and transfers.
- <u>Schedule & route planning</u>: assist in the development of more realistic schedules.

AVL systems can also be used in conjunction with other systems to implement the following functions:

- <u>Silent alarm system:</u> to send police assistance when driver security is threatened.
- <u>Automated data collection</u>: to collect data on the location of passenger boardings in conjunction with automatic passenger counters.
- <u>Stop announcement system:</u> to provide location information to a stop announcement system that notifies visually-impaired passengers of upcoming bus stops.
- <u>Travel information system</u>: to provide up to the minute travel time and schedule adherence information that can be given to customers waiting at major bus stops, or in their home or office.

New technologies are also being incorporated in the areas of automated fare collection, automatic passenger counting, maintenance management, bus scheduling/dispatching, etc.

C. STATE-OWNED AIRPORTS: STUDIES & MAJOR PROJECTS

1. BRADLEY INTERNATIONAL AIRPORT

Bradley International Airport provides many vital services to Connecticut and western Massachusetts including; scheduled domestic and international air carrier services, commuter/regional airlines, chartered flights, cargo and mail services and facilities for general aviation. It also functions as a base for both the Army and Air National Guard. The Airport will maintain these services by proactively planning for the needs of the tenants, passengers, and visitors. This planning will enable Bradley International Airport to become one of the top airports in the Northeast. Following are descriptions of the studies in progress and projects to be undertaken at Bradley International Airport. ¹

a) Terminal at Bradley International Airport

The Department is conducting a study up to and including the schematic design for improvements to the terminal facilities at Bradley International Airport. The Connecticut Department of Transportation (ConnDOT) legislatively has been charged with the responsibility for providing the State's current and future transportation needs. Recognizing its responsibility and the trust which has been placed therein, ConnDOT, as part of the Terminal Study, has conducted an operational and financial feasibility analysis on the possible replacement of the obsolete, 16-gate, Terminal B which was constructed in 1949, 48 years ago. Our analysis indicates that the status quo or no-build alternative is inadequate due to the age and condition of Terminal B.

The study suggests that a new Terminal complex be constructed as an extension to the southeast of existing Terminal A at a cost of approximately \$125 million with at least a thirty (30) year useful life and nine (9) net additional contact gates (from 21 to 30), retain the International Arrivals Building (IAB), and then demolish Terminal B to provide additional aircraft parking.

In the 1998-1999 budget \$135 million has been earmarked for improvements at Bradley International Airport.

b) Construction of an Airport Rescue and Fire Fighting Building

This project involves the construction of an Airport Rescue and Fire fighting Building along with related site improvements at Bradley International Airport.

Building work for the facility consists of the construction of a two-story office and living quarters with three single-story, drive-through, vehicle bays. The building is steel frame construction with masonry siding.

Site work associated with the facility consists of excavation and grading work to accommodate the building, removal. and disposal of existing pavement, regrading of site for storm runoff, installation of utilities, installation of drainage structures, installation of new pavement and concrete aprons, pavement markings, the fire station facility structure, curbing, security gates and fencing, built-up curb ramps and

-

¹ The projects were taken from the Bradley Master Plan completed in 1992

sidewalks, landscaping, signage, and exterior site lighting. This project is scheduled for completion during the summer of 1999.

c) Glycol Recovery System

The Bureau of Aviation and Ports has embarked on a project to resolve the issues associated with glycol runoff into neighboring streams. The solution to this problem is to provide an area where aircraft can be deiced and the resultant runoff containing glycol can be collected, treated, and disposed of in a manner acceptable to and in accordance with DEP regulations.

The project will construct an area where aircraft can be deiced and the resultant runoff captured and treated and/or disposed of. The project initially will provide for three aircraft positions where glycol runoff will be captured at various concentrations and then treated by a contract vendor. The vendor will utilize a process of reverse osmosis to extract highly concentrated glycol for which there is a market and would discharge the remaining product, water with extremely low concentrations of residual glycol, into the Poquonock Brook Treatment Plant. Any stormwater runoff at the remote deicing facility would not be released to a storm system until such time as the remote deicing facility has been pressure washed by the airport's vacuum trucks and all traces of residual glycol eliminated. Only after there are no detectable limits of glycol, would that runoff be permitted to go into a storm system. Construction is scheduled to begin in the spring of 1999. The project should be completed in the fall of 2000.

d) New Maintenance Facility Project 165-328

This project involves the construction of a new maintenance facility along with related site improvements. Currently in the preliminary design phase, the facility would consist of a one story building with an attached two story office area, living quarters, and outbuildings for cold and sand storage. The proposed site for this facility is on the east side of the airport, just south of the Army National Guard Facility.

This project has been initiated for two reasons:

- At its present location, the maintenance facility impedes the construction of the new passenger terminal.
- Airport maintenance functions have been located at multiple sites on the airport, some on a temporary basis. This project will consolidate all maintenance functions at one location.

The project is scheduled for completion in the fall of 2001.

2. HARTFORD-BRAINARD AIRPORT

Rehabilitation of Runway 11-29 and Taxiway B at Hartford-Brainard Airport Project No. 63-521

This project will entail the rehabilitation of runway 11-29, taxiway B, and a portion of the GA apron located to the north of the T-hangars at Hartford-Brainard Airport. The primary objective of this project will be the resurfacing of the aircraft pavements to extend their service life for an additional twenty years. Also incorporated into this project will be the upgrading of the runway and taxiway

lighting and signage to current FAA standards. Drainage improvements will also be addressed within the runway and taxiway environments including in proximity to the Airport's electrical vault. An emergency diesel generator will also be installed next to the electrical vault. This project was completed in November 1998.

3. DANIELSON AIRPORT

Reconstruction of Runway 13-31 and Taxiway "A" at Danielson Airport Project No. 68-183

This project will consist of the reconstruction of Runway 13-31, Taxiway "A", Taxiway "B", and the clearing and grubbing of approximately two acres of brush along the northerly side of Taxiway "A". The primary objective of this project will be the resurfacing of the aircraft pavements to extend their service life for an additional twenty years. Also incorporated into this project will be the upgrading of the runway and taxiway lighting and signage to current FAA standards. Drainage improvements will be limited to resetting catch basin tops within the runway and taxiway environments and improving drainage in the proximity of the intersection of Taxiway "A" and "B". This project was completed in November 1998.

4. WATERBURY-OXFORD AIRPORT

a) Sanitary Sewers Project 107-138

The primary purpose of this project is to provide a sanitary sewer which will conduct sewage from the existing hangar buildings along with the State office and maintenance buildings to an existing municipal sanitary trunk which terminates on Hawley Road. This project will also allow for an additional extension to the east side of the Airport for future development. The sewer line will be gravity fed to a pump station south of the intersection of Christian Street and the airport access road, from the pump station the line will be a force main to the existing terminus on Hawley Road. This project will be awarded in the fall of 1998. Construction is scheduled to begin in spring 1999.

b) Safety Improvements Project 107-144

This project serves two functions in that it will enhance the safety on Runway 18-36 while at the same time provide for additional useful pavement length for operations. The proposal is divided into two phases, the first of which is a study currently underway whose primary function is to optimize expenditures while deriving maximum safety benefits from any proposed construction. The study will fine-tune a construction proposal which, at this time, will add approximately 500 feet of pavement to the runway's southerly end utilizing the existing embankments and will provide an additional 300 feet of runway pavement and accompanying embankment at its northerly end. The actual limits of construction will be determined in this initial study. Any incremental adjustment of runway length pavement has a corresponding value in terms of safety and threshold location. The determination of these values is to be fine-tuned in this study phase.

5. WINDHAM AIRPORT

a) Taxiway "A" Extension Project 163-176

This project will entail the extension of Taxiway "A" to the full length of parallel Runway 9-27. This extension will require a right of way from abutting property owners in order to clear the appropriate taxiway safety areas. The project will include new taxiway lighting, drainage, and signage to current FAA standards. This project is currently in the design phase and is to be awarded in the spring of 1999 with construction scheduled to begin in the summer/fall of 1999.

6. GROTON-NEW LONDON AIRPORT

a) Runway 15-33 Reconstruction Project 58-263

This project will consist of the reconstruction of Runway 15-33 and Taxiway "B". The primary objective of this project will be the resurfacing of the aircraft pavements to extend their service life for an additional 20 years. Also incorporated into this project will be the upgrading of the runway and taxiway lighting and signage to current FAA standards. Drainage improvements will also be addressed within the runway and taxiway environments. The project is currently in the design phase and will be constructed in 1999.

D. BRIDGE PROGRAM

1. BRIDGE MANAGEMENT SYSTEM (BMS)

The Department has implemented a Bridge Management System (BMS) to provide quantitative data and recommendations to be used in the cost conscious oversight of the State's bridge inventory. The management system is centered around an AASHTO computer program, Pontis, which utilizes a comprehensive data base of bridge, traffic, cost and safety related data to produce a network level analysis. Since the conditions of bridges are ever changing, the BMS is continually processing data gathered during recurring inspections to update its prediction models. In this way, future deterioration of a structure can be estimated more accurately.

By using the BMS, the Department will be able to:

- 1. Predict deterioration with and without intervening actions.
- 2. Identify feasible actions to improve condition, safety, or serviceability.
- 3. Estimate costs and user savings.
- 4. Determine maintenance strategies.
- 5. Optimize a program over a specified period with limited funds.
- 6. Generate reports for various governing bodies.

The Department's Bridge Safety and Evaluation Section(BS&E) has been collecting Pontis inspection information since early 1996. There have been several upgrades of the Pontis software over the past few years. BS&E is presently transferring data to the latest version of Pontis (3.2). Once this is complete, preliminary budget vs. rehabilitation scenarios are scheduled to be tested. The output will be compared over a period of time with current programming results. Some

adjustment to the cost modules of Pontis are anticipated to adjust the recommendations. Once the output is proven to be reasonable, it will be used to help program bridge rehabilitation work.

E. HIGHWAYS: THE COMPONENTS AND THE SYSTEM

In this section goals, plans and/or recommendations for each of the components of Connecticut's highways are presented, strategic corridor planning studies are discussed and major capital projects to be undertaken to maintain, repair or improve the State's highway system are described and listed.

1. HIGHWAY COMPONENTS

a) Pavement

The Department of Transportation's stated goal is to resurface 438 two-lane miles of pavement each year. This represents approximately 10 percent of the mileage in the state system. The State has to be a leader and make a concerted effort to pursue innovative solutions to the problems of maintaining our considerable investment in the infrastructure. The overall quality of the roadways in Connecticut has improved since the onset of the infrastructure rebuilding effort that began in the late 1980's. However, we are seeing the beginning signs of a leveling off in the overall condition of our roads. This is due to the fact that our focus has largely been on resurfacing as a means of improvement. In order to meet the challenges that face us as pavements approach the end of their service lives, we must re-focus our attention to alternative, state-of-the-art, rehabilitative technologies and plan for more extensive repairs. Our decisions must be based on sound engineering judgment, improved safety for the traveling public and wise investment of moneys entrusted to us.

Pavement Management System

A Pavement Management System (PMS) is a tool that aids the State and local highway agencies in the planning, scheduling, and prioritization of highway maintenance and rehabilitation projects. A properly designed PMS will provide invaluable information that will assist in the development of resurfacing and reconstruction programs that will maintain the highway network at a predetermined level of quality. Proper use of a PMS can ensure that scarce funding is wisely spent in the most efficient manner possible.

The output goals of a PMS are:

- Network evaluation of existing pavement conditions
- Construction, rehabilitation, and maintenance history
- Prediction of the future performance of roadway pavements, (remaining life expectancy)
- Effectiveness of past rehabilitative measures
- Determination of most appropriate level of treatment, (minor or routine maintenance versus rehabilitation or major reconstruction)
- Prioritization of roadway network needs (optimization of resources)

The Department's PMS is migrating to a system that is more automated than ever. Photographic images of the road will be scanned by computer to determine the level of distress. Also, the roughness of the surface is quantified and together with distress, is used to generate an annual Pavement Condition report, which is one tool used to develop the resurfacing-by-contract and the vendor-in-place paving programs.

Currently, the Department is in the process of assisting six planning regions in the development and implementation of Pavement Management Systems of their own. They are: Central Connecticut Regional Planning Agency (RPA), Council of Governments for the Central Naugatuck Valley, Greater Bridgeport RPA, Midstate RPA, South Western Regional RPA, and Valley RPA. All of the agreements are finalized and all of the regional Pavement Management Systems are expected to be implemented in 1998. The Department will continue to support all the RPAs in developing, implementing, and maintaining Pavement Management Systems.

b) Traffic Signals

- Identify in the Department's budget requests funds needed to allow maintenance to replace and repair deteriorated traffic signal equipment.
- Continue to replace traffic signals in Highway Reconstruction Projects.
- Identify aging equipment in need of replacement and schedule the work through contracts.
- Continue to expand usage of energy efficient bulbs.

c) Pavement Markings

- Identify in the Department's budget requests funds needed to allow Maintenance to replace pavement markings.
- Continue to install durable pavement markings in highway reconstruction projects.
- Continue to evaluate different types of pavement marking materials to determine what products are best suited for different applications.

d) Traffic Signs

- Develop photographic inventory of major signs.
- Develop a program to test the reflectivity of sign faces based on future FHWA standards.
- Continue to conduct periodic reviews of the structural adequacy of sign supports and repair/replace as necessary.
- As technology improves, continue to evaluate sign face sheeting improvements to make the State's signing more legible and conspicuous to drivers, especially the elderly.
- Secure additional funding to assure essential signing remains noticeable.

e) Highway Lighting

The Department's goal is to provide efficient, quality, well-maintained, highway lighting on portions of the State Highway System where required. To fulfill this goal, the Department must assess the need for new lighting on any particular highway; and also assess the need to deal with deficiencies of existing Highway Lighting Systems. Once lighting needs are identified, they will be prioritized and included in a proposed Transportation Improvement Plan for funding, design, and construction.

f) Connecticut Guide Rail Program

Four projects to upgrade deficient guide rail have been initiated. As of December 1997 the design of two projects had been completed and the other two projects were in the design phase. The Department will continue to initiate projects to eliminate deficient guide rail on the NHS, as well as other State routes, until the Department is in full compliance with the FHWA mandates.

g) Highway Rest Areas (Income Producing Service Areas)

<u>Use</u>. Existing service areas should continue to be leased out to provide basic services to the motoring public.

<u>Goals</u>. Current Food and Fuel Concessions agreements should be modified/amended to facilitate a common expiration term. This would allow for more flexibility with respect to incorporating the complete redesign of food and fuel facilities into request for proposal (RFP) documents.

<u>Anticipated project needs</u>. Future requests for proposals (RFPs) should make provisions for complete site redevelopment at specific service areas. ConnDOT should share with future lessees the costs for major capital expenses and should consider longer term leases as well as alternative fueling. Some facilities should be relocated to provide better service for the motoring public.

<u>Status of projects</u>. The pavements and parking lots of service areas should be maintained or replaced as part of roadway paving projects.

h) Commuter Parking Program

The statewide network of commuter parking facilities and their amenities encourage efficient use of the existing transportation system by increasing ridesharing, reducing traffic volumes, fostering energy conservation, and improving air quality.

Since 1988, \$6.0 million in bonding authorization has been made available for commuter parking improvements and \$5.3 million has been obligated to date on these parking facilities. Current and future activities include various commuter parking improvement projects such as repaving and restriping those lots deemed to be in fair or poor condition, reconstruction of lots for conformance with the Americans With Disabilities Act (ADA). Efforts are also underway to install informational kiosks at selected sites and to construct two new commuter lots in the Towns of Colchester and Washington. An informational brochure, entitled "Park & Ride Your Guide to Connecticut Park & Ride Locations", which indicates the capacity, location, available services,

and amenities at each commuter lot, is currently available for distribution and will continue to be updated on an annual basis or as necessary.

i) Congestion Management System (CMS)

The Congestion Management System is a systematic process that provides information on transportation system performance to decision makers for selecting and implementing cost effective strategies to manage new and existing facilities to alleviate traffic congestion and enhance mobility. It contributes to the efficiency of the planning process and provides a framework for the consideration of alternative transportation solutions. The system includes performance measures, data collection, needs analysis, strategy identification and a method to evaluate the effectiveness of any actions.

Each year ConnDOT produces a report on congestion throughout the state. This annual report card on congestion serves to both identify individual problems and to monitor overall congestion levels and trends. This report contains sufficient data on each region to suggest those corridors which would be candidates for a CMS strategy report.

Using the annual congestion screening report ConnDOT and the MPOs cooperatively prepare special studies on specific congestion problems. These studies provide a detailed analysis of the congestion problem and a full evaluation of the appropriate mitigation strategy. Subsequently these reports will provide the basis for ConnDOT and the MPOs to jointly select a strategy of project selection and programming.

j) Traffic Monitoring System (TMS)

ConnDOT's Traffic Monitoring staff will continue to work with Highway Operations personnel in the utilization of traffic sensors (installed for traffic signals) as supplementary tools for monitoring traffic volume. A review of sites where permanent sensor volumes and portable sensor volumes were compared indicated that the variation between the volumes was acceptable and that permanent sensors may be a viable option. The software has been loaded on a PC to allow direct communication between ConnDOT's traffic monitoring staff and the Highway Operations sensors.

Various activities are underway to expedite the collection and processing of the traffic data. Some of these include:

- The continuing development of GIS-based ADT maps which can be used for the electronic preparation of traffic monitoring assignments for field personnel, for making traffic data available automatically over a local network and for facilitating responses to telephone inquires.
- The continuing development, with other members of the New England Traffic Monitoring System Pooled Fund Study, of a uniform data-formatting, data-editing and data-storing variation of "The Maryland System" developed by GIS/TRANS.

k) Safety Management System

The Safety Management System (SMS) is a management process designed to ensure that all opportunities to improve safety are identified, considered, implemented where appropriate, and evaluated. The system is designed to provide additional information needed to make informed decisions for optimum utilization of limited resources. It is a process that employs communication, cooperation, and coordination among individual units (and related organizations) responsible for varying transportation elements, as they relate to the driver/human, roadway/environment, and vehicles. Broadly defined, the organizations include: state and local transportation agencies, state and local enforcement agencies, emergency response services, motor carrier safety, the Motor Vehicle Department, public health facilities, railroad/trucking regulatory agencies, and safety advisory groups. The major safety areas are:

Broad-based Safety - Multi-disciplinary activities and programs, including arterial highway corridor and SAFE COMMUNITIES (community based education and enforcement programs).

Highway Safety Improvement Program - Identification, investigation, setting of priorities and correcting hazardous (or potentially hazardous) roadway situations.

Early Safety Consideration - Processes to be developed to ensure the early consideration of safety needs, goals, and priorities throughout the planning, development, and construction of all projects and activities.

Special User Group - Identified high-risk groups found, through traffic crash history, to be over-represented (in crashes) when compared to the general motoring population, or those groups found to hold potential to be particularly vulnerable as related to the entire traffic crash picture. The special user groups include (but are not necessarily limited to); older drivers, pedestrians, bicyclists, motorcyclists, aggressive drivers, drowsy drivers, commercial motor carriers, and hazardous materials carriers.

Safety Hardware, Highway Elements, and Operational Features

Features - The routine maintenance and upgrading of safety hardware, highway elements, and operational features. Hardware features are defined as including: guide rail, signs, pavement markings, poles (i.e. utility poles), impact attentuators, and highway/rail crossing warning devices.

The State's Safety Work Plan was submitted by the Department to the Federal Highway Administration prior to the October 1, 1994 requirement. The focal point designee, the Chief Engineer, ensures that safety is considered and implemented – as appropriate – in all phases of highway planning, design, construction, maintenance and operations.

In the summer of 1997 a request was made from the Department to the FHWA Division Office for an SMS Assessment. Section 402 Highway Safety funds (FY 1998) will be programmed to complete that task.

1) ConnDOT's Plan to Facilitate Road Use by Elderly Drivers

Section 43 of Public Act 96-167 required the Commissioner of Transportation, in consultation with the Commissioner of Motor Vehicles, to develop and submit to the Connecticut General Assembly by January, 1998, a plan to facilitate road use in the state by elderly motor vehicle

operators. In developing the plan, the Commissioner of Transportation was directed to consider the following improvements:

- 1. Installation of reflective pavement markers
- 2. Wider pavement markings
- 3. Use of overhead street name signs, advance street name signs and advance guide signs on arterial streets
- 4. Work zone safety delineation
- 5. Improved pedestrian crosswalks
- 6. Larger traffic control signals
- 7. Improved roadway design and lighting, including but not limited to, reconfiguration of intersections
- 8. Awareness training for elderly drivers

As outlined and discussed in ConnDOT's plan, "Older Driver Report to the Legislature," road use by elderly motor vehicle operators will be facilitated through a broad range of efforts.

- <u>Pavement Markings</u>. ConnDOT considered a variety of pavement marking materials, reflective pavement markers, and line widths and has chosen to use durable pavement markings on the pavement. These markings have good visibility during daylight and hours of darkness. They remain effective from one-and-a-half to two years, depending upon the amount of traffic, and for two years for most highways.
- <u>Signing</u>. One grade of reflective sheeting cannot provide the conspicuity needed at all locations. Therefore, the type of reflective sheeting used depends upon the sign type and location, as well as the traffic conditions. Towns are permitted to install the type of street name signs of their choosing. They are also permitted to install advance street name signs and overhead street name signs where feasible and they deem appropriate.
- Work Zone Safety. Standards guidelines are established for traffic control through construction areas. The sign reflectivity and color are unique to construction areas providing a high degree of awareness for approaching drivers. A number of actions in progress within ConnDOT intended to improve work zone safety include: guidelines for more effective use of the state police, review of pavement marking removal practices, tree trimming, guidelines for usage of truck-mounted impact attenuation devices and variable message sign (VMS) usage guidelines.
- <u>Pedestrian Crosswalks</u>. Pedestrian crosswalks are more conspicuous through change in appearance and use of durable pavement markings. The pedestrian push buttons were made easier to use and a more informative sign used with walk signals. Special signing is available where there is special law enforcement and audible pedestrian signals are provided for the visually impaired.
- <u>Traffic Signals</u>. ConnDOT has adopted the largest traffic signal in use (12" diameter {300mm}) as its normal signal. The indications have been made brighter with fewer occurrences of bulb burn-out with lower energy costs by converting to light-emitting diode (LED) bulbs.

- <u>Lighting Fixtures</u>. ConnDOT generally tends toward using more uniform light levels where continuous lighting is provided. Lighting fixtures have been almost completely converted to high pressure sodium fixtures which are more energy efficient while providing a given light level.
- Roadway Geometric Design. Primary geometric design concerns for the older driver include situations involving complex speed judgments under time constraints, especially left-turn geometry and operations. ConnDOT is now aware of this and will do whatever is feasible through roadway geometric design and traffic control devices to address those concerns.
- <u>Training courses</u>. Training courses for older drivers are provided by the American Association of Retired Persons (AARP) and the Automobile Association of America (AAA). The Connecticut Department of Motor Vehicles instituted a Graduated Driver's License Program.
- Transportation. Some drivers will either be required or will choose not to drive their vehicles. Currently there are several programs that help provide transportation to those persons; these include Americans With Disabilities Act Paratransit Systems, which provides persons with qualified disabilities whose origins and destinations are within three-quarters mile of fixed-route services; the Section 5310 program which provides specially designed wheelchair vehicles for non-profit organizations serving the elderly and handicapped for whom mass transportation is unavailable, insufficient, or inappropriate; and reduced fares for the elderly and disabled riders of state-subsidized, fixed-route services (bus and rail).

These efforts are discussed in more detail in ConnDOT's "Older Driver Report to the Legislature."

2. STRATEGIC CORRIDOR PLANNING STUDIES

A number of corridor planning studies are underway for various congested highway corridors in Connecticut. The need for these studies was identified in the Long-RangePlans prepared by the regional planning organizations (RPOs). The Department has the lead responsibility on several of the studies and is working in consultation with the RPO's and the towns. Other on-going corridor studies are being conducted by the RPOs, in cooperation with the Department and the corridor towns.

These studies will be the basis for developing a coordinated, integrated plan of transportation improvements for each corridor, including the scheduling for implementation of projects over a twenty year period. Most of the studies will also include access management plans for the corridor towns. The towns are actively participating in the process through Corridor Advisory Committees. Public participation is being encouraged through newsletters and public information meetings scheduled in the corridors throughout the course of the studies.

Corridor planning studies presently being conducted by Department include:

- Hartford West Corridor Hartford to Plainville
- I-84 Waterbury to Southington
- Route 82/85/11 Corridor Salem to Waterford

a) Hartford West Corridor - Hartford to Plainville

The Department and FHWA, in cooperation with the Capitol Region Council of Governments and Central Connecticut Regional Planning Agency, is conducting a two-phase transportation study of the Hartford West corridor from Plainville to Hartford. The initial phase involves the preparation of a Major Investment Study (MIS) which includes a detailed analysis of current and future transportation problems and a full evaluation of a wide range of alternatives. Alternatives under consideration are: adding HOV lanes on I-84, operational and safety improvements on I-84, providing a light rail or bus lane down the median of I-84, initiating commuter rail service on the Hartford-New Britain rail line, constructing a bus lane on the Hartford-New Britain rail line and improving bus service in the corridor. A full list of alternatives are being developed through the project scoping process as required by federal regulations. Pending the outcome of the MIS, which includes a major public involvement process, the Department will prepare the necessary environmental documentation.

b) I-84 - Waterbury to Southington

ConnDOT and the FHWA, in cooperation with the Central Connecticut RPA and the Council of Governments of Central Naugatuck Valley, prepared a Needs/Deficiency analysis to determine the transportation needs between Waterbury and Southington. The study included an approximately ten mile portion of the I-84 corridor between Hamilton Avenue in Waterbury and Prospect Street in Southington.

Areas investigated in the initial phase (completed in June, 1995) included the existing I-84 roadway geometry and traffic operations, transportation demand to the year 2015, the identification of environmentally sensitive areas along the corridor, and the identification of potential strategies to address the needs identified. As part of the next phase, preliminary improvement strategies have been evaluated. A Draft Federal Environmental Assessment/Connecticut Finding of No Significant Impact (EA/FONSI) has been prepared. It evaluates an option to widen I-84 with interchange modifications and compares the findings against the Do Nothing base case scenario. A public hearing was held in June 1998 and a final EA/FONSI is being prepared. Design activities will begin in the fall of 1998 with the first construction activities slated for 2002.

c) Route 82/85/11 Corridor: Salem to Waterford

The Department and FHWA, in cooperation with the Southeastern Connecticut Council of Governments (SCCOG), has identified the need to evaluate potential multimodal improvements to this corridor. ConnDOT and SCCOG have begun a Major Investment Study/Environmental Impact Statement (MIS/EIS) for the corridor. A Corridor Advisory Committee has been formed. The study will address a range of alternative actions to improve transportation services in the corridor. Potential alternative improvements and management strategies that will be investigated include, but are not limited to, no action, transportation demand management, transportation systems management, mass transit, widening of existing routes, new roadway construction, intersection spot improvements, improving operational/geometric characteristics or a combination of options. A Draft MIS/EIS is expected in the fall of 1998 with subsequent public hearings.

d) Southwest Corridor Study

Implementation of the Southwest Corridor Study is a major element of the Department's effort to better utilize existing transportation services and to reduce congestion.

This study was prepared in response to Special Act 97-13 which required the Commissioner of Transportation to develop an update to the Southwest Corridor Study. The study was conducted in cooperation with the South Western, Greater Bridgeport, Valley and South Central Regional Planning Agencies. Input was also sought from area business groups, local Chambers of Commerce, environmental groups and other interested parties who aided in identifying local and regional transportation issues.

The goal of the study was to develop a plan of action that would reduce highway commuter demand during peak periods from the 1997 base levels by five per cent within a period of five years. The legislation required that in conducting the study the Department consider the following:

- 1. Consider options with respect to financing the maintenance of the current transportation system and future capital improvements to such system.
- 2. Evaluate travel demand management strategies.
- 3. Identify intrastate transportation opportunities and impediments.
- 4. Assess the interregional services of the three regional transportation plans.
- 5. Develop a plan of action to integrate such intermodal and interregional opportunities into the corridor transportation system.

In evaluating strategies and opportunities, other elements that were considered included existing and future fiscal resources, environmental constraints, safety of the traveling public and the need for maintenance and congestion relief. Also considered in alternative strategy identification was the political and public palatability of the option.

The study area of the Southwest Corridor includes major transportation facilities from the town of Branford to the town of Greenwich at the New York state line. This would include the state highway system, transit services and Metro North railroad.

As previously stated, the legislation specifies that the goal of this study is to develop a plan of action that will be able to reduce by five percent in five years the highway commuter demand during the peak periods from the 1997 levels. A summary of the major elements of the study's plan and action steps are provided below. Additional detailed information on the study, major plan elements and the 14-step action program can be obtained by reviewing the Southwest Corridor Study Report.

Major elements of the Southwest Corridor Study Plan are as follows:

- <u>Implementation Task Force.</u> A policy group to oversee implementation of the plan.
- <u>Rail Station Parking Management</u>. Evaluation and implementation of rail parking management strategies.
- Parking Study. Development and initiation of a comprehensive parking study in the corridor.

- <u>Local Bus Study</u>. Apply the recommendations of the study of local bus systems.
- Expand Rail Parking. Continue the program of rail parking expansion and optimization to meet anticipated needs of rail patrons.
- Enhanced Rideshare Services. Participate in a program which involves a more aggressive "consumer product" approach to attracting and retaining commuters to alternative commuting modes.
- <u>Commuter Choice Incentive Program</u>. Seek legislative changes which will make commuter choice financial incentives possible.
- <u>Telecommuting</u>. Continue the marketing of telecommuting to encourage voluntary participation by employees.
- Rail Freight. Pursue the extension of CSX and Norfolk Southern service through to New Haven as an alternative for freight movement in the corridor.
- <u>Truck Policy</u>. Work with the trucking industry to explore strategies to lessen their impact during the peak travel periods.

To achieve the goal of reducing congestion by 5% within five years, the study recommends pursuing a 14-step program of action. The steps are listed below.

- 1. Increase intra-state train commuters.
- 2. Increase ridesharing.
- 3. Increase van pooling.
- 4. Increase full-time telecommuting.
- 5. Increase part-time telecommuting.
- 6. Create incentives for modest work schedule changes.
- 7. Increase inter-regional bus ridership.
- 8. Promote Long Island Sound ferry service.
- 9. Make state government a model employer in providing commuting flexibility.
- 10. Create financial incentives for individuals to make new commuting choices.
- 11. Eliminate barriers for employer wishing to increase employee commuter choices.
- 12. Continue to expand and improve current incident management techniques.
- 13. Help drivers avoid incident-created congestion with "real time" information.
- 14. Create a permanent working group of commuters, employers, service providers, municipal officials, state DOT, OPM and DEP personnel, MPOs, truckers and environmentalist to oversee and assist in implementation of the five-year plan.

e) Southeastern Connecticut Corridor Study

Public Act 97-214 required the Commissioner of Transportation to conduct a study of the transportation demands and needs of the southeast corridor of the state and submit to the Transportation Committee of the Connecticut General Assembly by February 1, 1998, a report on the study. This study was conducted in cooperation with the Southeastern Connecticut Council of Governments, South Central Regional Council of Governments and the Connecticut River Estuary

Regional Planning Agency. Input was also sought from area business groups, local Chambers of Commerce, environmental groups and other interested parties who aided in identifying local and regional transportation issues. The legislation required that in conducting the study the Department of Transportation (ConnDOT) address the following:

- 1. Consider options with respect to financing the maintenance of the current transportation system and future capital improvements to such system.
- 2. Evaluate travel demand management strategies.
- 3. Identify intrastate transportation opportunities and impediments.
- 4. Assess the interregional services of the three regional transportation plans.
- 5. Develop a plan of action to integrate such intermodal and interregional opportunities into the corridor transportation system.
- 6. Develop marketing strategies to promote usage of the Shore Line East rail line and commuter parking facilities.

In evaluating these strategies and opportunities other elements that were considered included existing and future fiscal resources, environmental constraints, safety of the traveling public and the need for maintenance and congestion relief. Also considered in alternative strategy identification was the political and public palatability of the option.

f) Regional Planning Agencies' Corridor Studies

Corridor studies recently completed or presently being undertaken by RPOs include:

Capital Region:

- Rte. 4 Farmington (completed in 1998)
- Rte. 10 Farmington to the Massachusetts state line (completed in 1998)
- Rte. 44 Hartford to Canton
- Rte. 15 Wethersfield to Berlin
- Rte 175 Newington to Wethersfield
- East Hartford Access to Rentschler Airport (completed in 1998)

The Route 44, Route 15 and Route 175 studies should be completed by January 1999.

Central Connecticut:

- Rte. 6 Bristol to Plymouth
- Rte. 72 Bristol to Plymouth

These studies began in 1997 and should be completed by January 1999.

Midstate:

- Rte. 17 Durham to Middletown
- Rte. 66- Portland to East Hampton

These studies began in 1997 and were completed in 1998.

Southeast Connecticut:

• Access Management Study - various State routes in the region

This study was initiated in the fall of 1997. It should be completed by December of 1998.

3. SOUTHWEST CORRIDOR COMMODITY FLOW STUDY

The Department is conducting a study to identify the nature, extent and severity of the goods movement problems in the southwest corridor of the State. This study will concentrate on the ways and the degree to which truck traffic contributes to congestion on Interstate 95, and will evaluate what can be done to alleviate the congestion and attendant safety concerns. The Department is currently collecting data on traffic volumes and truck weights, and has purchased a database of commodity flows into, out of and through the State. This database includes information on shipment types, weights, origins, destinations and routings. The information obtained will be correlated in an to attempt to identify which movements are susceptible to transport by some other mode such as rail or barge. The Department has also held several meetings with the regional planners, shippers and receivers, and representatives of transport providers to learn their specific freight concerns, issues and priorities. The study is expected to be completed by December 31, 1999.

ConnDOT is also coordinating with other states and participating in a regional study of freight issues in the New York – New Jersey – Connecticut area, including studies of the intermodal terminals in northern New Jersey. This should prove helpful in identifying an important segment of corridor traffic.

4. MAJOR CAPITAL PROJECTS: HIGHWAY SYSTEM

a) Interstate 95 (I-95) Bridgeport Corridor Improvement Program

The Program consists of the reconstruction and realignment of I-95 in Bridgeport from the Fairfield/Bridgeport town line (Interchange 25) to the vicinity of the Bridgeport/Stratford town line (Interchange 29), a distance of 3 miles. The project also involves the rehabilitation and/or replacement of structurally deficient bridges and additional structure width to provide for lane continuity and operational purposes in the final highway configuration.

To accomplish the proposed reconstruction, the Corridor Improvement Program has been divided into five major contracts.

Projects 15-214 and 15-230 include the reconstruction of the I-95 bridge over the Yellow Mill Channel, the elimination of the southbound off-ramp to Pembroke Street and the northbound on-ramp from Pembroke Street, and the reconfiguration of Interchange 29 (Stratford Ave./Seaview Ave.). This project is currently under construction.

Projects 15-268 and 15-269 consist of reconstruction of I-95 from Wordin Avenue to Warren Street, including the Route 8 interchange. A major structure which carries I-95 over the Metro-

North Railroad, Iranistan Avenue and Park Avenue is also included in the contract. This project is also under construction.

Project 15-270 provides for the construction of the southern third of the Bridgeport Harbor Bridge and the partial reconstruction of other structures over local streets. The project starts in the vicinity of Lafayette Street and terminates at East Main Street. Also included in this contract is an access road to the ferry and a replacement parking lot. This project is also under construction.

Project 15-271 completes the remaining two-thirds of Project 15-270, which again includes major construction over the Bridgeport Harbor. Project 15-271 is complete in design and is expected to be advertised in the fall of 1998.

Project 15-272 starts south of the Fairfield-Bridgeport town line and continues northward to Wordin Avenue. Included in this contract is the relocation of Pine Street and the elimination of a portion of Cherry Street to allow for the substitution of a single span structure over Bostwick Avenue in lieu of the present multi-span viaduct. This project is in design and is expected to be advertised for construction in November 1999.

b) I-95 "Q" Bridge New Haven

The I-95 New Haven Harbor Crossing (Q-Bridge) Study is being conducted to determine the structural, operational and capacity needs of Interstate 95 where it crosses New Haven Harbor. In July, 1994, six alternatives were presented by the Intermodal Concept Development Committee (ICDC), which was established to advise ConnDOT and FHWA about possible corridor alternatives. The six alternatives were developed from a list of 160 ideas and twelve preliminary alternatives. The public was given the opportunity to review and comment on the six proposed alternatives.

After reviewing the public input, the ICDC reached consensus on seven alternatives to be analyzed in detail as part of a Supplemental Draft Environmental Impact Statement (EIS). The Federal Transit Administration, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Services, National Marine Fisheries Service, U.S. Environmental Protection Agency and FHWA have also concurred with the chosen alternatives. The Supplemental Draft EIS was made available for public review and comment in May, 1997. A Final EIS which will define the recommended project, is being prepared.

c) Route 2/2A/32 Corridor

ConnDOT and the SCCOG completed a MIS which analyzed the transportation deficiencies in the Route 2/2A/32 corridor between Norwich, New London and Stonington. In conducting the MIS, a Multimodal Advisory Committee (MAC) was established. At the completion of the study, the Department and FHWA recommended that six alternatives be advanced to the Draft EIS for more detailed study. The development of the Draft EIS is underway.

d) High Occupancy Vehicle (HOV) - I-84 Connection to Hartford

This improvement includes the extension of the HOV lane from its existing terminus in East Hartford to the Founders Bridge, the addition of eastbound and westbound slip ramps for increased HOV accessibility and modifications to the Connecticut Boulevard/I-84 on-ramp and the westbound I-84/I-384 HOV merge for improved safety. The design for this project has been completed and advertising is scheduled for the fall of 1998.

e) Route 25 Monroe to Newtown

The Department has prepared a Draft Environmental Assessment/Finding of No Significant Impact (EA/FONSI) for proposed improvements within this corridor. A full range of alternatives is discussed in the EA/FONSI. The Department's preferred alternative is a limited widening of existing Route 25 from the northern terminus of the Route 25 expressway in Trumbull to the vicinity of the Mile Hill Road/Route 25 intersection in Newtown.

f) Route 6 - Brooklyn

The Department is proposing a series of improvements to Route 6 in Brooklyn. The proposed improvements are divided up into three sections, the Western, Central and Eastern sections. The Western section consists of improved horizontal and vertical geometry and widening the existing travel lanes and shoulders. The Central section has a minimal widening through the Historic District. The Eastern section consisted of vertical and horizontal improvements and a widening to four lanes in the vicinity of the Killingly town line. The project has been extensively coordinated with the Town of Brooklyn and the State Historic Preservation Officer. A Final EA/FONSI has been approved. A design public hearing was held in June 1998. Design on all three sections will continue with construction expected to start in the fall of 2000.

g) Route 6 Bolton to Windham

The Department, in cooperation with the FHWA and the Corps, has, for the past six years, been engaged in a joint NEPA/Section 404 process for improvements within the Route 6 transportation corridor between Bolton Notch and Windham. A Draft EIS and a Supplemental Draft EIS have been prepared. Public hearings have been held and extensive coordination with federal, state, regional and local officials has been undertaken. To date, over 135 alternatives have been investigated. Issues within the corridor include impacts to water and wildlife resources, community cohesion impacts and historical resource impacts. A Final EIS is being prepared for the Department's recommended course of action.

h) Route 7 Norwalk to Danbury

The Department has been coordinating with corridor metropolitan planning organizations (MPOs) and local officials on a program of capacity and safety improvements on existing Route 7. Environmental documents have been prepared for the completion of the Route 7 expressway/Merritt Parkway interchange in Norwalk, improvements to the Route 7 corridor from Grist Mill Road in Norwalk to the vicinity of the Route 7/33 intersection in Wilton, and a proposed widening of existing Route 7 from the vicinity of Route 7/33 intersection in Wilton to the Olmstead Hill Road/Route 7 intersection in Wilton. A Final EA/FONSI has been prepared and approved for the widening of the existing Route 7 from the vicinity of the Ridgefield/Danbury

town line to the Route 7 expressway in Danbury. The Department is also working with the corridor MPOs in the development on an access management/curb cut policy to preserve and manage access onto existing Route 7. The goal of the policy is to extend, to the maximum extent practical, the service life of the planned transportation improvements in the Route 7 corridor.

i) Route 7 - Brookfield to New Milford

The transportation improvements to be made in this corridor are the construction of a by-pass around Brookfield center and a series of projects to reconstruct existing Route 7 from the terminus of the bypass project to Routes 202/67 in New Milford.

The by-pass project involves an extension of the freeway section of Route 7 from its existing terminus with Route 202, northerly to a new terminus in the vicinity of the New Milford town line. The project length is approximately 2.6 miles. The project bypasses the Brookfield Four Corners and will improve safety and traffic operations. The Department held a design public hearing on July 1, 1998, and is now proceeding with the final design phase. This project is scheduled for advertising in March of 2000.

The additional seven reconstruction projects will provide four travel lanes on existing Route 7 from Cross Road, the Brookfield bypass area, to the vicinity of Route 202/CT 67 in New Milford. Turning lanes will be provided at various intersections to improve capacity and safety. A median is proposed on the southern section which will begin in the vicinity of the Brookfield bypass terminus and continue northerly to the New Milford commercial area. Federal environmental documentation for the corridor has been approved. All design work has been coordinated with the Route 7 Technical Advisory Committee and periodic status meetings are held to discuss the progress of these projects. As of August 1998 public informational meetings had been held for six of the projects. The last informational meeting was being scheduled for the fall of 1998.

j) Milford - Route 15 - Sikorsky Bridge

This project provides for the replacement of the Sikorsky Bridge, which carries Route 15 over the Housatonic River. The current span, including the open-grate bridge deck, will be replaced to the south by a new steel structure with a concrete deck.

The approach roadways on Route 15 will be reconstructed to match the alignment of the new bridge. A new combined walkway/bikeway will be located on the north side of the bridge and will connect to local roads. Landscaping will be provided on the Stratford approach in accordance with the Merritt Parkway Master Plan. The design of the project is essentially complete and the advertising is scheduled for November 1998.

k) Monroe - Route 34 - Stevenson Dam Bridge

This project provides for the replacement of the Stevenson Dam Bridge, which carries Route 34 over the Housatonic River. The structure which is currently located on the dam is over 70 years old and is in a severely deteriorated condition. This project proposes to replace the existing structure with a new structure upstream of the dam.

A Draft EA\FONSI was published in February of 1998 and a public hearing was held in March of 1998. The project is under design with advertising currently scheduled for November 1999.

1) Route 72 - Bristol

A Federal Reevaluation of the previously approved Final EIS was prepared for the proposed improvements to Route 72 in Plainville and Bristol. The purpose of the study was to reevaluate the previously proposed alternatives, as well as the preferred alternatives. A Federal Finding of No Significant Impact has been received for the preferred alternative. Route 72 will be relocated on a new location as a four-lane arterial highway from the terminus of the existing Route 72 expressway in Plainville to the Pine Street/Todd Street intersection in Bristol. East of the Todd Street intersection, Pine Street will be widened to four lanes to a point 1,600 feet west of the Pine Street/Emmett Street intersection. From this point on Pine Street, Route 72 would proceed northwesterly, paralleling the railroad and terminating at the Route 229/Route 72 (Riverside Avenue) intersection. The total length of this project is 3.2 miles. This project is currently under design and is scheduled to be advertised in the fall of 2001.

m) Route 34 - New Haven

This project will reconstruct Route 34 on the north side of the existing right-of-way from Route 10 (Ella Grasso Boulevard) to the vicinity of the College Street overpass. This reconstruction will eliminate the existing one-way system for eastbound and westbound Route 34 in this corridor. From Route 10 to the vicinity of Day Street, Route 34 will be reconstructed as a four-lane bidirectional roadway with a raised median. From this point, Route 34 will continue beneath Howe and Park Streets and the air-rights garage and match the existing Route 34 expressway at the College Street overpass.

Additionally, Legion Avenue from Route 10 to Howard Avenue will be converted to a two-lane bi-directional roadway and South Frontage Road will be maintained as a one-way eastbound road easterly from Howard Avenue.

This project is currently in the final design phase and is scheduled to be advertised in December of 1999.

F. PUBLIC TRANSPORTATION

The Department's Capital Project Management Plan gives priority to safety-related projects, to projects that are necessary to bring the transit infrastructure and rolling stock to a state of good repair and to keep them in that condition, and to projects which provide accessibility to the disabled as required by the Americans with Disabilities Act (ADA). In conjunction with the Governor's Southern Connecticut Initiative, the Bureau of Public Transportation will utilize a comprehensive menu of transit services, demand management strategies, employer and employee incentives and capital improvements to reduce highway vehicle usage by 5% by the year 2002. Other general goals include increasing the use of technology to improve operational efficiency and customer service and reducing single-occupant vehicle use through telecommuting, compressed work weeks, etc. Following are descriptions of plans, studies, programs and major projects that are programmed to be undertaken during the 1998 through 2020 time frame:

1. TRANSIT

a) Statewide Effort to Market Transit

Attracting trips from non-transit-dependent passengers has been always difficult to achieve. To attract new riders, the State has started a statewide marketing effort. Activities will include promotional features to increase awareness of public transportation services such as "Try Transit Week" which took place in May 98, and specific, targeted efforts for specific services or targeted populations.

b) Bus Transit Studies

The Department is conducting two distinct bus transit studies: a Comprehensive Local Bus System Study and a Bus Transit Management, Governance and Finance Study to determine how to more effectively and efficiently operate and manage the bus systems and routes in Connecticut. These studies are discussed below.

Comprehensive Local Bus System Study

The Comprehensive Local Bus System Study will evaluate the operations, performance, productivity and efficiency of the seventeen urban bus systems, five rural bus systems, and twenty-one express bus routes operating in the State, including all services required by the Americans with Disabilities Act (ADA) in each of the systems. Based upon the findings of this evaluation, the study would recommend modification or redesign of current bus operations to achieve operational efficiencies. Such recommendations would include expansion of service into new market areas, reduction or restructuring of routes, changes in the hours of operation, restructuring of the entire system network, or changing the method of bus operation from a predominately fixed-route system to a mix of fixed-route, demand-responsive, and route-deviated buses. In addition, the study will recommend revisions in State policy or new policies relating to performance standards, fare structure, inter-regional services, and intermodal connectivity. It is anticipated that the study will be completed in 1999.

Bus Transit Management, Governance and Finance Study

The Bus Transit Management, Governance and Finance Study will evaluate the administrative and management structures of the state-subsidized urban and rural bus systems operated separately under the control of various agencies, including complementary ADA paratransit. The study will develop and evaluate any viable alternatives to the current structure, which may include consolidation of some or all of the various functions of the various agencies responsible for planning, managing, making policy, financing, and operating transit services.

c) Capitol Region Council of Governments' Regional Transit Strategy

In the fall of 1998 the Capitol Region Council of Governments (CRCOG), with financial support from the Federal Department of Transportation, the Connecticut Department of Transportation and the MetroHartford Millennium initiated work to develop an innovative strategy to guide the region's overall approach to transit. The purposes of the Regional Transit Strategy, which are identified in the CRCOG Long-Range Transportation Plan, are:

- To guide the improvement, coordination and expansion of the Region's numerous transit and paratransit services;
- To determine the role of fixed guideway transit in the Region's future;

- To develop recommendations for the Region to contribute to capital and or operating costs for transit;
- To determine how an expanded transit system should be managed.

It is anticipated that this project will be completed by the spring of 2000.

2. RIDESHARE PROGRAMS

Connecticut's ridesharing program will remain committed to enhancing our quality of life and economic development by implementing programs that improve our air quality, conserve fuel, and make more efficient use of Connecticut's highways. However, the trend to deliver these benefits will shift from a promotional/educational effort to a coordinated statewide program that is goal oriented.

The program will move along two separate yet supportive paths. One path will help employers in the development and delivery of trip reduction programs. The other path will offer programs and products that support an individual's decision to rideshare.

3. RAIL PROGRAMS

a) Rail Parking

The Office of Rail estimates the demand for rail parking spaces by taking minimum of 65% of the passengers boarding at each rail station. This takes into consideration that a certain percentage of NHL customers will take public transportation, carpool, walk or be dropped off at the station. Currently at some stations this percentage is higher or lower; however, it provides a reasonable basis on which to estimate future parking needs.

The need to provide adequate parking at Connecticut's New Haven Line stations is addressed in the Department's Public Transportation Capital Project Management Plan. Facility Inventory. Rail station parking capital projects are included in this 20-year plan which is Appendix A of the Department's Public Transportation Management System (PTMS). There are five parking expansion projects programmed in the Plan between 1998 and 2003. It is estimated that these five projects, totaling more than \$60 million, will provide approximately 3,000 additional parking spaces. This will represent a 24 percent increase in the New Haven Line parking capacity in Connecticut.

Due to local opposition to the expansion of surface parking and construction of parking structures, the Department has been meeting with certain elected officials to try to reach a consensus on the construction of parking structures as a viable solution to the continuing demand for rail parking in their communities.

The Department also will investigate the possibility of establishing a long-term strategy of developing large regional parking facilities to accommodate express and intrastate rail services. These regional facilities may or may not be developed at existing stations.

b) At-Grade Crossings

There are thirteen railroad companies in Connecticut operating approximately 575 route miles of track, excluding yards. Traversing these lines are 348 public at-grade crossings and approximately 325 private at-grade crossings. Of these, 75 public crossings and 46 private crossings are located on lines that carry both passengers and freight. The balance of the crossings are located on low to moderate speed, freight only lines.

Currently, all 75 public crossings on passenger carrying rail lines are equipped with railroad flashing lights and 63 are equipped with both railroad flashing lights and vehicular gates. By late 2000, following completion of improvement projects now in design, all 75 public crossings on passenger carrying rail lines will be equipped with both railroad flashing lights and vehicular gates. While some private crossings are equipped with automatic warning devices, all others have standardized passive warning signs.

When crossing projects are initiated under the program, they are for a total improvement of the crossing. These improvements include signs, markings, installation/modernization of warning devices, track circuitry upgrade, surface improvement, alignment and sight distance improvements, unless noted otherwise.

Connecticut Operation Lifesaver

Operation Lifesaver is a national, non-profit public information program dedicated to improving public safety by reducing the number of injuries and fatalities associated with at-grade railroad crossing crashes and incidents of railroad trespass. In 1992, under the authority of Section 13b-376(a) of the Connecticut General Statutes, Connecticut joined ranks with 49 other states by establishing a Connecticut Operation Lifesaver Committee to promote the program on a local level. As stated in this legislation, the Committee shall annually review its progress and submit its findings and recommendations to the joint standing committee of the general assembly having cognizance on matters relating to transportation.

The Committee, which is chaired by the Commissioner of Transportation and administered by the Office of Rail, is made up of the Commissioner of Education, the Commissioner of Public Safety, two representatives from civic organizations, a representative of the railroad industry, a representative of the parent teacher organization, a representative of a local law enforcement agency, and a local government official. Numerous other individuals from the Connecticut Department of Transportation, the Connecticut Department of Public Safety, the Connecticut Department of Motor Vehicles, operating railroads, law enforcement agencies, and the general public serve as technical advisors to the Committee.

In keeping with the principles of the national program, the mission statement of the Connecticut Operation Lifesaver Committee reflects its goal of enhancing railroad safety through the principles of education, enforcement and engineering. To this end, the Committee continues to sponsor frequent rail safety presentations at bus companies and area schools, and safety information booths at local fairs and other major public events. In addition, the Committee will soon sponsor a series of rail safety awareness and grade crossing collision investigation seminars for the benefit of law enforcement agencies around the state.

In August 1996 the administration of the Operation Lifesaver Program and Committee activities was transferred within the Department of Transportation from the Office of Highway Safety to the Office of Rail. Since that time, efforts have been redoubled to improve the reach of the Program. Twenty-four new Operation Lifesaver presenters were recently certified to increase the Department's ability to meet the demand for presentations at schools and civic organizations. During the period, October 1, 1996, through September 30, 1997, the Operation Lifesaver message was delivered by certified presenters at 179 presentations and safety information booths and reached approximately 225,000 people in the State of Connecticut, including transportation industry personnel, school bus drivers, school children and other members of the general public. Connecticut Operation Lifesaver will continue to improve the reach of the program in the coming year by adding presenters, by greater involvement from the Committee members, and by increasing the program's exposure to the general public.

On September 30, 1997, Connecticut Operation Lifesaver was successful in securing the necessary funds (partially through a State Assistance Grant) to purchase two Operation Lifesaver displays. One display is a 10 by 10 floor model and the other is a tabletop model. Both displays are an actual photograph, taken from inside the engineer's cab of a train as it approaches a crossing with a school bus stopped on the tracks. The caption reads, "If you were the engineer of this train, chances are you could not stop in time." The displays are also imprinted with the Connecticut Operation Lifesaver logo and the official seal of the Connecticut Department of Transportation.

It is estimated by the Federal Highway Administration that 7,200 lives have been saved and 31,000 injuries have been averted through the activities of Operation Lifesaver and the Federal Grade Crossing Safety Improvement Program.

c) Commuter Rail System Safety Program Plan

Background

ConnDOT and other American Public Transit Association (APTA) intercity and commuter railroads committed to the FRA, the development of comprehensive system safety plans to ensure the safety of their operations beyond the Interim System Safety Plan requirements of Emergency Order No. 20 in June 1996.

All passenger railroads agreed to participate in the APTA Commuter Rail Safety Management Program and submit program plans for review and audit of key program elements, prior to issuance of final FRA regulations for System Safety Program Plans. During the interim, the FRA has agreed to monitor and review the ATPA Safety Management Program.

ConnDOT's draft System Safety Program Plan was submitted to APTA in September 1997. The final plan was completed in March 1998. A safety audit of plan provisions is planned during the first quarter of 1999.

Plan Description

The System Safety Program Plan is the Department's principal safety document. It defines how the safety effort is implemented and identifies the staff and/or procedures required to maintain it. The plan is a living document that tracks changes in the system.

Specifically, the plan addresses fire protection, inspection and testing, maintenance and repair of equipment, employee training and qualification, emergency response planning and training, system modifications, configuration management, internal safety management assessment and the safety certification process.

This plan will be used for guidance in the development of equipment, facilities and operations. It describes approaches, processes and responsibilities for identifying safety requirements and issues to reduce the risks of hazards. It ensures that safety issues are treated equal to cost and performance issues when design tradeoffs are made utilizing MIL-STD-882 Hazard Identification and Resolution methodology.

4. MAJOR CAPITAL PROJECTS: TRANSIT (BUS AND RIDESHARING)

a) CT TRANSIT - Bus Replacement

Provide funding to replace 26 buses for the Stamford division.

b) Waterbury Bus Facility: ROW, Preliminary Engineering, and Construction

Provide funding to purchase the land and for the preliminary engineering activities for the construction of the new facility.

c) CT TRANSIT - New Haven Bus Facility: ROW, Preliminary Engineering and Construction

Provide the funding to purchase the land and for the preliminary engineering activities for the construction of the new facility.

5. MAJOR CAPITAL PROJECTS: RAIL

a) Replace BR#03673 over Arch Street (MP 28.06) - Greenwich

Replace the existing Arch Street Bridge including strengthening the east abutment, and a new west abutment and a ballast superstructure.

The replacement of the Arch Street Bridge will be combined with the replacement of the North Water & Hamilton Avenue bridge replacements as well as the Mainline Catenary Replacement from State line to Stamford.

b) Construction of ADA Improvements - Darien Railroad Station

At Darien Station, update existing signage to include Braille in conformance with the ADA standards; provide access to both east and west bound platforms by tunnel or elevator; new pavement and striping; sidewalks; handicapped parking stalls; provide accessible routes; provide warning strip on platform edges update interior with new doors, etc.; modify ticket counters, update public address and telephone systems; and update rest rooms.

c) Construction of ADA Improvements - Westport Railroad Station

Construct ADA improvements at the Westport Station. These improvements include; updating existing signage to include Braille in conference with ADA standards; providing access to both east and west bound platforms by tunnel or elevator; new pavement and striping; sidewalks; handicapped parking stalls; providing accessible routes; providing warning strips on platform edges; updating public address and telephone systems; and updating rest rooms.

Several meetings were held with town officials during 1995, 1996 and 1997. In October 1997 a design option for a new pedestrian tunnel was accepted by the Town of Westport. The Department has completed negotiations with TAMS Consultant's ,Inc. on the design of the new tunnel. Advertisement for this project is scheduled for November 1999 with construction completion in April 2002.

d) Construction of ADA Improvements - Fairfield Railroad Station

At Fairfield Station, update existing signage to include Braille in conformance with the ADA standards; provide access to both east and west bound platforms by tunnel or elevator; new pavement and striping; sidewalks; handicapped parking stalls; provide accessible routes; provide warning strip on platform edges; update interior with new doors etc.; modify ticket counters, update public address and telephone systems; and update rest rooms.

A public informational meeting was held in May 1996 to discuss a new westbound station, parking structure, and up-and-over structure. The outcome of the public involvement process was that local residents would not support major renovations at the station unless the shortage of parking was addressed. However, solving the parking shortage by constructing a parking deck also was unacceptable to the residents because of its negative impacts on the surrounding neighborhoods. As an alternate solution, the Town of Fairfield suggested that ConnDOT construct a new, ADA-compliant station and parking at a United Parcel Service (UPS) property (the former Bullard Casting Co.) located in a more commercial/industrial area and let the existing station remain as is.

An environmental site investigation of the UPS property was completed in September 1997. Several areas of environmental concern were identified and the clean-up cost was estimated to be 1.2 million dollars. ConnDOT has been negotiating with the developer of the UPS property to reach an agreement on a development plan for the new station. Because of the Town's request that ConnDOT leave the existing station as is and meet the ADA requirements at the new site, ConnDOT has not begun design of the ADA renovations at the existing station. ConnDOT is analyzing the options of constructing a new station versus staying at the existing site. As of October 31, 1998, there was no design schedule for either project.

e) C - 23 Track Program FY 1998

Implement a concrete tie program on the New Haven Line. Program will be phased in over ten years due to operational and funding considerations. Phase I will occur on track 3 from the state line (mile post 26.1) to South Norwalk (mile post 41.0). Purchase and install 40,000 concrete ties, undercut 15 track miles, surface 15 track miles, purchase 8 track miles of new 136lb rail and install 15 miles of new 136lb rail (seven miles purchased under C-22B).

f) Construct Stamford Center Island Platforms

Construct additional island platforms, thereby increasing platform capacity and increasing the speed at which a train can board and deboard passengers. In addition, construct changes in track configuration and signaling, including the use of high speed crossovers to minimize delays associated with yard and other moves. The alternative which has been selected for the design phase is comprised of several components. It includes two center island platforms which are each 1020 feet long and two new side platforms which are each 850 feet long. As a result of the platform modifications, the Washington Avenue railroad bridge's superstructure and substructure will have to be replaced. In addition, catenary, power, signal, and communication work will need to be performed in the area, and new crossovers will be installed. Also, the station will be brought into ADA compliance.

g) New Haven Shops & Yard - New Haven Line Car Storage Yard

Construct a car storage area in the New Haven yard for approximately 100 rail cars. These storage tracks will also have water supplies and manifolds for servicing car toilets. The project includes building demolition, utility installations (gas, water, sewer, and electric) and a yard signal system.

h) Main Line Catenary Replacement - State line to Stamford

Replace the existing catenary system with a constant tension wire supporting system, designing the system for maximum speed allowed by track geometry and other physical constraints. The methodology for replacing the existing overhead catenary system is based on replacement with a two wire constant tension catenary. The average distance between balance weight terminations being approximately 5,100 feet throughout the route. Single track outages will be required for extended periods between adjacent interlockings. Installation of new multiple track pull-offs on curves will also require multiple track outages during off-peak night hours for limited durations.

i) New Haven Parking Garage Expansion

Expand the parking garage or build new spaces adjacent to the station. Increase the size of the existing parking garage to accommodate expected future need.

j) Electrical Substation Upgrade and New Substation Construction - New Haven

Replace the oil-filled circuit breaker and related protective system components at New Haven (Anchor Bridge 1060) with a state-of-the-art ground mounted system and construct a new substation at New Haven in the vicinity of mile post 72.6 to be known as substation 1086. The replacement breakers will be specified as indoor draw-out-type breakers and the new substation will be enclosed in a prepacked modular enclosure. They will be of the same voltage and current rating as the vacuum circuit breakers currently in service on the New Haven Line at Port Chester and Sasco Creek.

k) PE, ROW and Utility - Construct New WALK and SAGA Bridges

Based on the outcome of the study, conduct all activities associated with PE, ROW and Utility phases of the project.

1) Main Line Catenary Replacement - Stamford to Norwalk

Replace the existing catenary system with a constant tension wire supporting system, designing the system for maximum speed allowed by track geometry and other physical constraints. The methodology for replacing the existing overhead catenary system is based on replacement with a two-wire constant tension catenary. The average distance between balance weight terminations being approximately 5,100 feet throughout the route. Single track outages will be required for extended periods between adjacent interlockings. Installation of new multiple track pull-offs on curves will also require multiple track outages during off-peak night hours for limited durations.

m) Replace Multiple Unit Fleet

Based on the outcome of the study, replace the Multiple Unit cars on the New Haven Line with the most effective rail car technology and rail car type available.

n) C-24 Track Program FY 2000

Implement a concrete tie program on the New Haven Line. Program will be phased in over ten years due to operational and funding considerations. Phase I of this project is C-23 Track Program. Exact location of Phase II of this project will be determined.

o) Stamford Station Parking Garage Expansion

Construct a new parking garage on the south and east side of the existing garage. This requires the purchase of five parcels of land to construct a five level garage. The new garage will provide approximately 1,100 additional parking spaces.

p) NH Shops & Yard-Construct New Transportation Building

Build a new transportation building that will provide support facilities for Metro-North employees. The new building will provide the staff with new facilities such as male and female locker rooms, toilets, and showers; a lunch room, a kitchen area, offices, a meeting room, a mechanical room, a janitor closet, and storage rooms.

G. BIKEWAYS, WALKWAYS AND TRAILS

ConnDOT is finalizing the development of a Bicycle and Pedestrian Transportation Plan for Connecticut. This plan will determine the direction ConnDOT will take for the next twenty years with respect to biking and walking. The Vision, Goals and Objectives listed below were adopted by the Department of Transportation and are a direct result of a collective effort between ConnDOT and the Bicycle and Pedestrian Advisory Committee (BPAC).

1. VISION

To enhance the bicycling and walking environment throughout Connecticut by providing for the safe, convenient and enjoyable use of these modes of transportation in an effort to meet the public's demand for improved mobility and a better quality of life. Any Connecticut resident will be able to walk, bicycle, or travel by other type of non-motorized transportation mode safely and conveniently from his or her home to any destination in the State. From any town, residents will be able to follow multi-use trails that are connected to other towns in the region, to other regions, and to

neighboring States and beyond. Employment centers, shopping areas, bus and train centers, recreation and cultural attractions, and schools will accommodate the walking and bicycling needs of employees, customers, residents, both within the development and to nearby destinations.

2. GOALS

GOAL 1: Provide a statewide multi-use trail system which is integrated with other transportation systems.

A. Objective: Develop multi-use facilities that provide for the desired mobility of bicyclists and walkers, while being responsive to social, economic, and environmental concerns.

ConnDOT is actively pursuing opportunities to adequately fund and construct multi-use facilities throughout the state.

B. Objective: Evaluate the suitability of accommodating walkers and bicyclists on those State routes included in the Planning Region's bicycle/pedestrian plans and the Connecticut Bicycle Map.

ConnDOT planners and designers currently investigate bicycle and pedestrian usage and accommodation on projects initiated.

C. Objective: Develop a system that measures the level of success of facilities by monitoring and documenting usage.

ConnDOT currently monitors usage on various facilities throughout the state.

D. Objective: Integrate the consideration of sidewalks and multi-use paths into all planning, design, construction and maintenance activities of the Connecticut Department of Transportation.

ConnDOT routinely considers the inclusion of these types of facilities where feasible for all projects.

E. Objective: Evaluate and provide bicycle facilities for intermodal connections, i.e., racks, lockers, etc.

ConnDOT is continually exploring options for expanding and enhancing existing facilities.

F. Objective: To evaluate and inventory selected State roads to determine its suitability for bicyclists and walkers, using criteria developed by FHWA.

ConnDOT currently conducts an ongoing inventory of these selected roadways.

GOAL 2: Provide and maintain a safe, convenient and pleasing bicycle and pedestrian environment.

A. Objective: Maintain funding priorities for the construction, maintenance, and operation of multiuse facilities.

ConnDOT is committed to fully utilizing all funding sources available for these purposes.

B. Objective: Provide multi-use facilities which consider the needs of commuting, recreational, touring, and utility bicyclists and walkers of all ages.

ConnDOT is evaluating facilities and planning for future connections continually.

C. Objective: Provide walkways at mass transit facilities which will enable the public to safely access the facility.

ConnDOT complies with all ADA requirements pertaining to our projects.

D. Objective: Adopt design standards and policies which promote safe, convenient and pleasing multi-use facilities that encourage bicycle and pedestrian transportation.

ConnDOT has been using the Federal Highway Administration's Guide for the Development of Bicycle Facilities since 1991 and will continue to support multi-use facility establishment.

E. Objective: Provide uniform signing and marking of all multi-use facilities, where warranted and as recommended by the Manual on Uniform Traffic Control Devices.

ConnDOT considers signing as an integral part of any project.

F. Objective: Develop a policy that encourages the maintenance of multi-use trails by the town or by an "Adopt a Trail" program.

ConnDOT encourages local communities and groups to enter into maintenance agreements with the state as part of the normal project development process.

G. Objective: Improve maintenance practices which maintain multi-use trails in a generally smooth, clean and safe condition.

ConnDOT is continuing to maintain as many multi-use facilities as priorities will allow.

GOAL 3: Encourage and support bicycle/pedestrian safety, education and enforcement programs.

A. Objective: Advocate the development of bicycle and pedestrian safety and education programs for cyclists and walkers of all ages, to improve bicycling skills, observance of traffic laws, and overall safety.

ConnDOT works in conjunction with the Department of Education to instruct children in the skills needed to enjoy bicycling and walking in a safe manner.

B. Objective: Monitor and analyze bicycle and pedestrian accident data in order to devise ways to improve bicycle and pedestrian safety.

ConnDOT is exploring options for data collection with local police departments.

C. Objective: Provide educational materials for motorists, through the Department of Motor Vehicles, for driver awareness of cyclists and pedestrians using the roadways.

The Department of Motor Vehicles will be including information in its 'Drivers' Manual.

D. Objective: Provide educational materials to schools and libraries for bicyclists and pedestrians of all ages.

ConnDOT provides Bicycle maps to any interested party.

- GOAL 4: Make full use of state resources in providing technical assistance to towns and municipalities relative to the development of bicycle and pedestrian facilities throughout our state.
- **A. Objective:** Encourage local towns and communities to put forward projects and proposals that they may have for review by ConnDOT.

ConnDOT will respond positively to any request for assistance pertaining to bicycle and pedestrian facility development.

B. Objective: Enlist the aid of Regional Planning Organizations (RPOs) in bringing forward local plans and strategies for bicycle and pedestrian development.

ConnDOT will maintain a close working relationship with RPOs to facilitate this plan.

ISTEA also requires that the MPOs include bicycling and walking in their Regional Transportation Plans. The proposed Long-RangeMulti-Use Trail Plan shows the proposed routes as developed by the MPOs and the Department. In 1992, the Department, with assistance from the Coalition of Connecticut Bicyclists, published Connecticut's Bicycle Map. This map was developed to serve as an indicator of the present travel routes for bicyclists in the state. The Long-RangeMap and the Connecticut Bicycle Map are to serve as the basis for determining where the Department will evaluate the suitability of providing sidewalks, shoulder widening, etc. and multi-use trails into its activities.

ConnDOT currently is seeking input from Connecticut towns to develop and publish within the next two years, a booklet of multi-use trails in Connecticut.

H. WATERWAYS

1. CONNECTICUT STATE FERRY SERVICE

A brief review of the Connecticut State Ferry Service operations was conducted in 1996. This review indicated that the ferries are predominately used by tourists and by Connecticut residents for social and recreational trips. The fares were found to be near their upper limits and any new fare increases are not recommended. Due to operational funding and personnel cuts, the ferry schedule has been reduced. The existing schedule was put in place in order to meet the demands of the tourist and recreational traffic. The ferry will continue to focus on meeting the demands of this market, by operating on weekends and holidays. If further schedule reductions are necessary, it will be done during the week to minimize the impact on the social and recreational traffic which is generated by this service.

2. STATE PIER

At the State Pier facility, the Department will continue to explore the possibility of purchase, lease, or joint operation of the adjacent Long Dock and supporting land area. Long Dock and its supporting land area are located on the western boundary of the State Pier property. The land area is about 26 acres in size and could be combined with the State pier property to provide additional land area to support port expansion. The roadway circulation pattern within the State Pier area will be improved. In concert with the State's economic development program, the Department will participate in a target marketing program which focuses on the region's competitive strengths, including its core industries of boat building, marine transportation and gaming.